REMARKS

This amendment After Final is in response to a final Office action (Paper No. 16) mailed 1 July 2004. Claims 1-5, 7 and 9-43 are pending in this application. Applicant is amending claims 1, 4, 5, 14, 17, 30, 35, 38 and 40 by this amendment and canceling without prejudice or disclaimer as to their subject matter claims 19 and 28 by this amendment.

In Paper No. 16, the Examiner has finally rejected claims 1-5, 7, 11, 13-17, 21, and 35-40 under 35 U.S.C. 103 (a) as being unpatentable over Johnson *et al.*, U.S. Patent No. 5,481,183 in view of Faris, U.S. Patent No. 5,347,525.

Applicant has 5 independent claims. Independent claims 1 and 4 are apparatus claims. Independent claims 5 and 17 are method claims. Independent claim 30 is an allowed apparatus claim.

Applicant is amending allowed claim 30 by this amendment to correct a typographical error. Specifically, the word "n" is replaced with the word --a--.

By this amendment, Applicant is amending independent claim 4 to include the subject matter of allowable depending claim 28 to place claim 4 and its depending claims in instant condition for allowance by this amendment. Applicant is also amending independent claim 17 to include the subject matter of allowable depending claim 19 to place claim 17 and its

depending claims in instant condition for allowance by this amendment.

Regarding independent claims 1 and 5, Applicant is amending these claims by this amendment based on the comments below: Applicant will first address the Examiner's "Response to Arguments" on pages 5-8 of Paper No. 16.

In Paper No. 16, the Examiner complained that Applicant's claim 40 claimed, "said method being absent a demultiplexing step" when the etalon serves to demultiplex. Applicant is amending claims 38 and 40 by this amendment to overcome this confusion. Applicant is trying to emphasize that the optical signal is not demultiplexed before impinging on the etalon as stated on the bottom of page 14 of Applicant's amendment filed on November 21, 2003 and as already claimed in claims 37 and 41. Applicant's rationale for these claims is clearly stated in comment number 6 of the November 21, 2003 amendment.

At the bottom of page 6 of Paper No. 16, the Examiner states that it was incorrect for Applicant to state that the Johnson '183 patent does not demultiplex signals. Applicant disagrees. Applicant submits that Applicant is correct when Applicant says that Johnson '183 does not demultiplex signals. Furthermore, Applicant is submitting definitions of "multiplexing" and "modulation" taken from www.whatis.com aka techtarget into the file wrapper of this application by this amendment. As seen in these definitions, a multiplexed signal is actually many signals (or many channels) combined together. In contrast, a modulated

signal, like Johnson '183 is a single signal and is not a plurality of channels. Thus, Applicant submits that the signal of Johnson '183 is an optically modulated signal and not a multiplexed signal because the signal of Johnson '183 represents a single channel, not a plurality of channels as in Applicant's invention and as in multiplexed signals.

Because Johnson '183 is a modulated signal and not a multiplexed signal, only one channel is present. Secondly, Johnson '183 does not teach separating a multiplexed signal into a plurality of individual channels (which is demultiplexing). Because 1) Johnson '183 has one channel and not many channels, and 2) because Johnson '183 does not split up a signal of many channels into a plurality of signals, each signal representing one channel, Applicant submits that it was inappropriate for the Examiner to characterize Johnson '183 as demultiplexing.

Furthermore, Applicant is amending claims 1 and 5 to clearly indicate that Applicant's resonant etalon demultiplexes a WDM signal by taking a signal comprising a plurality of channels and splitting each channel from each other. This feature was already claimed in claims 35, 36 and 39. Applicant submits that neither of the applied prior art references teaches using an etalon in this fashion to demultiplex a signal.

On page 6 of Paper No. 16, the Examiner alleges that Applicant stated that Johnson's etalon passes only a single frequency. Applicant disagrees. Applicant submits that Johnson passes a single carrier frequency. Johnson '183 modulates an RF signal onto an optical signal

using frequency modulation where the frequency of the carrier waveform is varied in small but meaningful amounts. Modulation does not infer multiplexing and multiplexing does not necessarily infer modulation.

On page 7 of Paper No. 16, the Examiner states, "Even if Applicant claimed channels it is believed this modification of the prior art would still be patentably obvious in view of Johnson." Applicant disagrees.

Johnson '183 teaches the use of an etalon and a video camera to analyze the frequency components of a frequency modulated signal, where an RF signal is modulated onto an optical carrier signal. Thus, only one channel is present in Johnson '183, and channels are not separated from each other in Johnson '183 as in Applicant's invention. Thus, in Johnson '183, the spectrum of a single channel is analyzed, while in Applicant's invention, a plurality of channels are split apart from each other and the signal to noise ratio is then analyzed. Thus, Applicant's invention is being used to do an entirely different and unrealted task than Johnson '183.

Further, the span in frequency of the signal in Johnson '183 is extremely small (i.e., logarithmically small) compared to the frequency span in Applicant's invention. Also, the thickness of the etalon and the free spectral range and the range of incident angles are logarithmically different as already discussed in the November 21, 2003 amendment. Also, in

Johnson '183, the signal is represented by frequency components where this is not necessarily true in Applicant's invention. For all of the above reasons, Applicant submits that it is inappropriate for the Examiner to state that modifying the etalon in Johnson '183 to split up and analyze a WDM signal is an obvious modification. Johnson's etalon is logarithmically different is so many ways from that of Applicant's etalon as previously discussed. Further, Applicant's etalon is accomplishing an entirely dissimilar task to the etalon of Johnson '183. Therefore, Applicant traverses the Examiner's contention that Applicant's channel splitting of a WDM signal is an obvious variant of Johnson's spectral analysis of a single RF signal modulated on an optical carrier.

Applicant has amended claims 1 and 5 by this amendment to emphasize that Applicant's etalon is splitting a WDM signal by channel in order to place Applicant's application in better condition for appeal. These features were essentially already claimed in claims 35, 36 and 39 and were already discussed extensively in the November 21, 2003 amendment and during the August 2003 interviews and thus should not result in a new search and/or consideration on the part of the Examiner and thus should be entered.

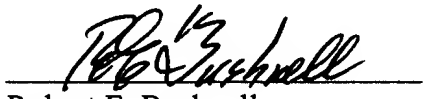
In summary, the etalon of Johnson '183 does not perform demultiplexing. Instead, Johnson '183 performs spectral analysis of a modulated signal having only one channel. Johnson '183 does not serve to separate one channel from another.

In contrast, Applicant's etalon receives a signal comprising a plurality of channels. Applicant's etalon spatially separates one channel from another. Thus, Applicant submits that the channel separating of Applicant's invention is not an obvious variant of Johnson '183 as alleged by the Examiner in Paper No. 16.

No fees are incurred by the filing of this Amendment.

In view of the above, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. Reconsideration of the rejections and objections is requested. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

Respectfully submitted,



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